

25. (Amended) The wireless communication system of Claim 23, wherein the primary speech coder is bit-exact.

*SB*  
26. (Amended) The wireless communication system of Claim 23, wherein the secondary speech coder is one of a family of speech coders.

*B6 SB*  
*cont*  
27. (Amended) A wireless communication system comprising;  
a signal strength indicator which determines the quality of a signal received by a mobile unit; and  
a speech coder selector in the mobile unit which causes the mobile unit to use a secondary speech coder when the signal strength exceeds a set value.

*B7 SB*  
30. (Amended) A wireless communication system comprising;  
means for determining the quality of a signal received; and  
means for switching in a mobile unit from a first speech coder to a second speech coder when the signal quality exceeds a predetermined value.

#### REMARKS

The May 23, 2001 Office Action was based on pending Claims 1-38. The Examiner rejected Claims 1-38 as unpatentable in view of the cited references. Further, the Examiner requested a more descriptive title. With this Amendment, Applicants submit a new title and amends Claims 1, 8, 18, 20, 21, 24-27 and 30. Thus, after entry of the Amendment, Claims 1-38 are pending. In view of the amendments and the following comments, Applicants respectfully request reconsideration and allowance of the pending claims.

#### Claim Rejections

The Examiner rejected **Claims 1-6, 8-12, 21-33 and 34-38** under 35 U.S.C. § 103(a) as being obvious over Ladden (U.S. Patent No. 5,885,003). Furthermore, the Examiner rejected **Claims 7, 20 and 34** under 35 U.S.C. § 103(a) as being obvious over Ladden in view of Wheatley (U.S. Patent No. 5,469,471). Applicants note that the

Examiner rejected all independent claims (i.e., **Claims 1, 8, 18, 27, 30 and 35**) over Ladden.

For the reasons set forth hereinafter, Applicants submit that these independent claims are patentable in view of Ladden. The respective dependent claims are likewise patentable for the same reasons stated below with respect to the independent claims and because of the additional inventive features recited in the dependent claims. **Claims 1-38** are therefore patentable in view of Ladden alone, or in combination with Wheatley.

Applicants respectfully disagree with the Examiner's conclusion that Ladden discloses all elements of **Claim 1** except the element "when the quality exceeds predetermined levels." The Examiner is correct that Ladden discloses a base station 203 and a mobile station 200 with two codecs 201, 202 (e.g., Figure 2). Ladden, however, does not disclose a signal strength decoder in the mobile station as defined in **Claim 1**. The quality sensor the Examiner identified in Ladden is not located in the mobile station 200, but within the speech recognition system 209 connected to the base station 203 (col. 5, lines 30-38, and Figure 2).

Furthermore, Ladden does not disclose a coder selector that uses the signal quality determined by the signal strength decoder to switch from the first to the second speech coder when the quality exceeds predetermined levels. Although Ladden discloses switching between the codecs of the mobile station, the base station controls this switching (e.g., col. 4, lines 55-58). This is contrary to the system in accordance with an embodiment of the present invention, for example, as defined in **Claim 1**, in which the signal strength detector and the coder selector are both located within the mobile unit, and the mobile unit switches between the speech coder as a function of the signal quality and independent of the base station.

These differences show that Ladden's system is based on a concept that is very different from the concept underlying the present invention. Thus, Applicants submit that the claims upon which the Office Action was based are patentable over Ladden.

However, in order to expedite examination and allowance of the application, Applicants have amended the independent claims. **Claims 1, 8, 18, 27 and 30** as amended specify that the coder selector is located in the mobile station.

According to Ladden's concept, the mobile station has a codec 201 that is optimized for human speech, and a codec 202 that is designed to enhance the speech recognition capability of the speech recognition system connected to the base station (col. 3, lines 48-52). The mobile station can send a message to the base station to request connection to the speech recognition system (col. 4, lines 47-50). The base station recognizes this request and instructs the mobile station to switch from the codec 201 to the codec 202 for speech recognition enhancement (col. 4, lines 55-58).

Thus, in Ladden, the trigger for switching the codecs is the request to connect to the speech recognition system. Then, the base station, not the mobile station, initiates the switching in the mobile station. This is contrary to the present invention because the trigger is not the signal quality, and because it is not a coder selector in the mobile unit that directs the switching between the coders. Ladden's concept is therefore contrary to the concept underlying the present invention. Applicants submit that Ladden's concept is in fact so contrary to the present invention that Ladden provides no suggestion or motivation to one of ordinary skill in the art that would result in the claimed subject matter.

Therefore, Applicants submit that Ladden fails to disclose or to suggest the subject matter of **Claims 1, 8, 18, 27, 30 and 35**. In view of these arguments, Applicants respectfully submit that the subject matter of **Claims 1, 8, 18, 27, 30 and 35** is not obvious over Ladden.

Dependent **Claims 7, 20 and 34** were rejected as being obvious over Ladden in view of Wheatley. Applicants submit that these claims depend from claims that are believed to be patentable as discussed above. **Claims 7, 20 and 34** are therefore believed to be patentable for the same reasons recited with respect to the independent claims and because of the additional features recited in the dependent claims.

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In view of these arguments, Applicants respectfully submit that the Ladden and Wheatley fail to disclose or to suggest the subject matter of **Claims 1-38**. **Claims 1-38** therefore patentable in view of the cited references.

### **Conclusion**

The claims are believed to be in condition for allowance and such allowance is respectfully requested. Applicants have endeavored to address all of the Examiner's concerns as expressed in the outstanding Office Action. Accordingly, amendments to the claims, the reasons therefor, and arguments in support of the patentability of the pending claim set are presented above. Any claim amendments which are not specifically discussed in the above remarks are made in order to improve the clarity of claim language, to correct grammatical mistakes or ambiguities, and to otherwise improve the capacity of the claims to particularly and distinctly point out the invention to those of skill in the art. In light of the above amendments and remarks, reconsideration and withdrawal of the outstanding rejections is specifically requested. If the Examiner finds any remaining impediment to the prompt allowance of these claims that could be clarified with a telephone conference, the Examiner is respectfully requested to initiate the same with the undersigned.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: 2/5/02

By: John R. King  
John R. King  
Registration No. 34,362  
Attorney of Record  
620 Newport Center Drive  
Sixteenth Floor  
Newport Beach, CA 92660  
(949) 760-0404

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**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**IN THE SPECIFICATION:**

The title has been amended as follows:

METHOD AND APPARATUS FOR DYNAMICALLY SWITCHING BETWEEN  
SPEECH CODERS OF A MOBILE UNIT AS A FUNCTION OF RECEIVED SIGNAL  
QUALITY~~CODING TECHNIQUES~~

**IN THE CLAIMS:**

The claims have been amended as follows:

1. (Amended) A wireless communication system comprising:

a base station which transmits signals;

a mobile unit which receives the signals from the base station, the mobile unit containing a first speech coder and a second speech coder, the mobile unit encoding voice data in a signal to transmit using either the first speech coder or the second speech coder;

a signal strength detector in the mobile unit which determines the quality of the signals received by the mobile unit; and

a coder selector in the mobile unit which directs the mobile unit to switch from the first speech coder to the second speech coder when the quality of the signals exceeds predetermined levels.

8. (Amended) A method of conserving power in a wireless communication system comprising the acts of:

determining the quality of at least one signal received from a base station; and

selecting in a mobile unit a secondary speech coder when the signal quality exceeds a predetermined value.

18. (Amended) A wireless communication system comprising;

a processor usage indicator which determines the loading on a processor in a mobile unit; and

a speech coder selector in a mobile unit which causes the mobile unit to use a secondary speech coder when the loading on the processor exceeds a set value.

20. (Amended) The wireless communication system ~~method~~ of Claim 18, wherein the secondary speech coder saves power.

21. (Amended) The wireless communication system ~~method~~ of Claim 18, wherein the secondary speech coder reduces processor loading.

24. (Amended) The wireless communication system ~~method~~ of Claim 23, wherein the secondary speech coder is not bit-exact.

25. (Amended) The wireless communication system ~~method~~ of Claim 23, wherein the primary speech coder is bit-exact.

26. (Amended) The wireless communication system ~~method~~ of Claim 23, wherein the secondary speech coder is one of a family of speech coders.

27. (Amended) A wireless communication system comprising;  
a signal strength indicator which determines the quality of a signal received by a mobile unit; and

a speech coder selector in the mobile unit which causes ~~the~~ a mobile unit to use a secondary speech coder when the signal strength exceeds a set value.

30. (Amended) A wireless communication system comprising;  
means for determining the quality of a signal received; and  
means for switching in a mobile unit from a first speech coder to a second speech coder when the signal quality exceeds a predetermined value.